

REMARKS

Claims 1-14 are pending in the application. No claims are amended. Reconsideration and allowance of claims 1 and 4-14 is respectfully requested in light of the following remarks.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 4-6 and 9-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,188,976 to Kume et al (“Kume”). The applicant disagrees.

Independent claims 1 and 12 recite the feature of “prior to formation of the tunnel oxide layer and the gate oxide layer, implanting impurity ions into the first and second active regions to adjust a threshold voltage of a MOS transistor.” In response to the applicant’s contention that Kume fails to teach the feature highlighted above, it is argued that it is “apparent to those skilled in the art that using ion-implantation steps to adjust the threshold voltage in the active areas are well-known techniques (See prior art reference USPAT 4,163,985) ... for evidence of the state of the art.”

This argument is not a proper 35 U.S.C. § 102 rejection, because the Examiner appears to be combining the teachings of Kume with the teachings of another prior art reference (USPAT 4,163,985), which has not been previously cited.

Normally, only one reference should be used in making a rejection under 35 USC § 102. MPEP 2131.01. There are three exceptions to this rule, but none apply because the 4,163,985 reference is not being used to prove the primary reference contains an “enabled disclosure,” the reference is not being used to explain the meaning of a term used in the primary reference, nor is the reference being used to show an inherent characteristic of a thing taught in the primary reference. MPEP 2131.01.

As explained in MPEP 2131, a claim is anticipated *only* if each and every element as set forth in the claim is found, either expressly or inherently described, in a *single prior art reference*. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987); emphasis added. In the previous response, the applicant explained how the Kume reference fails to teach the specific feature of claim 1 recited above. It is not proper to overcome this argument by pairing the teachings of Kume with the teachings of another reference while simultaneously maintaining that the claim continues to be rejected under 35 U.S.C. § 102.

Thus, the applicant continues to submit that claim 1 is not anticipated by Kume, because Kume fails to show the identical invention in as complete detail as is contained in the

claim. MPEP 2131, *citing* Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236 (Fed. Cir. 1989).

Claims 4-6, 9-11, and 13 depend from claim 1. Thus, Kume does not anticipate claims 4-6, 9-11, and 13 because it fails to teach every feature inherent to the claims (MPEP 2131).

Claim Rejections – 35 U.S.C. § 103

Claims 1, 4-6 and 8-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent Application Publication 2002/0008278 A1 to Mori (“Mori”) in view of US Patent No. 5,292,681 to Lee et al (“Lee”). The applicant disagrees.

Claims 1 and 12 recite, *inter alia*, the feature of “prior to formation of the tunnel oxide layer and the gate oxide layer, ***implanting impurity ions*** into the first and second active regions ***to adjust a threshold voltage of a MOS transistor***” (emphasis added).

The Examiner states that “Lee et al., in figures (Figs. 19-21 and 25-26) disclose the feature of implanting impurity ions into the cell array region and peripheral circuit region to form a ***well*** prior to formation of the gate oxide layer and tunnel oxide layer” (emphasis added). Thus, it is apparent that the Examiner is specifically alleging that it is the “wells” of FIG. 19 that are formed by an implantation process.

In response to the applicant’s contention that Lee fails to teach the above feature, it is alleged that “Lee, in related text (Col. 8, line 36 and 64-65) discloses that the p-well is a P-well implant and [the] n-well is a phosphorous implant.” The applicant disagrees. The “related text” that the Examiner has found is not referring to the N-well 9 or the P-well 18 of FIG. 19, but to the “P-type region 121” shown in FIG. 16 (column 8, line 37) and the “N-type layer 123” shown in FIG. 18 (column 8, line 60).

As the applicant explained in the previous response, Lee teaches that “the wafer is subjected to a ***high temperature drive step*** which causes the boron atoms in original P-layer 121 and the phosphorous atoms in original N-type layer 123 to ***diffuse*** deeper into the substrate, ***creating a N-well 9 and a P-well 18***” (FIG. 19; column 8, line 67 – column 9, line 3; emphasis added). Thus, contrary to the Examiner’s assertion, it is clear that both Lee’s N-well 9 and P-well 18 are created through a diffusion process and not an ion implantation process as recited in claims 1 and 12.

For the above reason, the Mori/Lee combination fails to establish a *prima facie* case of obviousness for claims 1 and 12 because it fails to teach or suggest all the features of the claims (MPEP 2143.03).

Claims 4-11 and 13 depend from claim 1. Consequently, claims 4-11 and 13 are patentable over the Mori/Lee combination because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03, citing In re Fine, 837 F.2d 1071 (Fed. Cir. 1988).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori in view of US Patent No. 5,976,934 to Hayakawa ("Hayakawa"). The applicant disagrees.

Claim 7 depends from claim 1. Consequently, claim 7 is patentable over the Mori/Lee/Hayakawa combination because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03, citing In re Fine, 837 F.2d 1071 (Fed. Cir. 1988).

Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1 and 4-14 is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Customer No. 20575

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.


Todd J. Iverson
Reg. No. 53,057

MARGER JOHNSON & McCOLLOM, P.C.
1030 SW Morrison Street
Portland, OR 97205
503-222-3613

